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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/506,458

09/01/2004

Ho Sung Kim

P/3653-10

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06/05/2007

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

595 MINER ROAD

CLEVELAND, OH 44143

EXAMINER

ZEMEL, IRINA SOPHIA

ART UNIT

PAPER NUMBER

1711

MAIL DATE

DELIVERY MODE

06/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/506,458	Applicant(s) KIM, HO SUNG	
	Examiner Irina S. Zemel	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2, 6 and 8-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added limitations "said mold defining an opening within a lower portion thereof" and "such that a total void volume of said microspheres is greater than a total interstitial void volume defined by spaces between the microspheres" are not supported by the specification as originally filed. The limitation reciting the opening in the lower portion is allegedly supported by the figure 1(d), however this figure schematically shows an opening in the bottom of the mold, and not in the "lower portion" of the mold which "lower portion" is not limited by the bottom of the mold and encompasses other areas of the mold. Insofar as the limitation regarding relative volume of microspheres and the voids between the microspheres, this limitation is not supported by the specification either. The figure relied upon for the support is clearly marked as "diagrammatic" view and not a figure where all of the components are drawn to the scale. It is not possible from a

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diagrammatic view to assess the actual values for the claimed respective volumes as it is not clear what constitutes volumes in between the microspheres and what is the void volume of the microspheres (how thick are the walls) and also, as noted above, nothing is drawn to scale. In addition, it is not seen from the figure that there are ANY voids between the microspheres at all, as the spaces between the microspheres are filled with liquid phase and not "voids". Thus the meaning of the limitations is further unclear.

.Claims 1, 2, 6 and 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As discussed above, the limitation "such that a total void volume of said microspheres is greater than a total interstitial void volume defined by spaces between the microspheres" is completely unclear as it is not understood what is referred to as the "void volume between the microspheres" as no voids are seen to be present in the spaces between the microspheres and as discussed in the specification, the resin appears to fill the spaces between the microspheres.

Claim Rejections - 35 USC § 102/103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-2, 6-10 are rejected under 35 U.S.C. 103(a) as obvious over AU Patent Application 200151857 to De Toffol (hereinafter AU De Toffol) under 35 U.S.C. 103(a)

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as obvious over its US corresponding patent 6,476,087 to De Toffol (hereinafter US De Toffol).

The rejection stands as per reasons of record. Insofar as the limitation to the "said mold defining an opening within a lower portion thereof", in the absence of any specific dimension of the "opening", the pores of the wicked mold disclosed by the reference define plural opening in the lower portion of the mold through which the excess of liquid phase flows away from the mold.

Insofar as the added limitation regarding microspheres floating to the top "such that a total void volume of said microspheres is greater than a total interstitial void volume defined by spaces between the microspheres", this limitation, as discussed above, is not supported by the original specification and is not understood. However, as discussed in the previous office action, since the density of the foams disclosed in the reference is governed to a large extent by the voids interstitial voids, varying the volume of the voids would have been obvious as varying a result effective variable, i.e., to achieve the foams of desired density.

Response to Arguments

Applicant's arguments filed 3-30-2007 have been fully considered but they are not persuasive. The arguments filed by the applicants on November 28, 2005 and August 18, 2006 and referred to by the applicants on page 6 of the 3-30-2007 response have been previously addressed in detail.

The newly submitted argument refer to the limitation that the mold defines an opening and that the excess of liquid is phase binder beneath the close packed array flows from the mold through the above-described opening defined in the subject mold. The applicants argue that the DeToffol reference does not disclose such opening. The examiner disagrees. The claimed opening is not defined in any way by either its geometrical shape or size or any other positive characteristics that can distinguish it from a "hole" or any void in the lower portion of the mold. As such, as discussed above, the claimed limitation to an "opening" is met by any pore or hole plurality of which is contained in wicked molds disclosed in the reference.

The applicants further argue that the arrangement described by the applicants in claim 1 recite "a total void volume of said microspheres is greater than a total interstitial void volume defined by spaces between the microspheres" which is different from the arrangements disclosed by the reference where the invention is described as foams in which the interstitial void volume should be greater than the void volume of the microspheres. First of all, as discussed above, even if such preferred embodiments are disclosed by DeToffol, this disclosure, in the examiner's opinion as previously discussed, does not constitute teaching away, rather it presents clear suggestion to vary the volume of interstitial voids to vary the foam density depending on the desired end use of the foam. Moreover, the teachings of DeToffol clearly refer to the voids contained in the spaces between the microspheres (see the illustrative examples describing respective volumes of microspheres, resin and voids), while in the instant specification there is no disclosure whatsoever regarding any voids between the

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micropospheres or their volume, or their characteristics. Thus, it is not even clear what the applicants refer to as the interstitial voids in their invention, and thus, it is not even clear how the arguments are relevant to the claimed invention.

The invention is still considered to have been obvious from the disclosure of the cited references.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Irina S. Zemel
Primary Examiner
Art Unit 1711



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